**Amendments to the Specification**:

Please replace the paragraph beginning at page 6, line 7, which starts with "Figs. A-F" with the following amended paragraph:

Figs. ~~3A-F~~ 3A-D are cross-sectional schematic diagrams illustrating the steps of a process making spin valves with low and stable coupling field according to a third embodiment of the present invention;

Please replace the paragraph beginning at page 9, line 1, which starts with "An ion beam sputtering method" with the following amended paragraph:

An ion beam sputtering method may be used to produce spin valves of the types depicted in Figs. 1 and 2 to easily control the deposition between wafers or within a wafer. An exemplary sputtering method is disclosed in US. Pat. No. 5,871,622 issued Feb.16, 1999 and U.S. Pat. No. 5,492,605 issued Feb. 20, 1996 by the inventor. Figs. ~~3A-F~~ 3A-D are cross-sectional schematic diagrams illustrating the steps of making spin valves of the types depicted in Figs. 1 and 2. As shown in Fig. 3A, a first ferromagnetic layer **304** is deposited on a substrate **302** in a vacuum chamber. First ferromagnetic layer **304** may be a free layer for a top spin valve or a pinned layer for a bottom spin valve. A first oxygen burst is introduced in to the vacuum chamber with oxygen partial pressure of about $5x10^{-6}$Torr. A first surface **305** of the first ferromagnetic layer **304** is exposed to this oxygen-rich atmosphere. Oxygen molecules are directed toward the substrate **302** and the substrate shutter, which is not shown in Fig. 3A, is fully open to directly expose first surface **305** to the oxygen. As a result, oxygen is physisorbed on the first surface **305** to produce a first ~~oxgen~~ oxygen treated surface **306**.